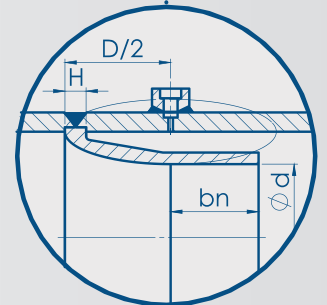
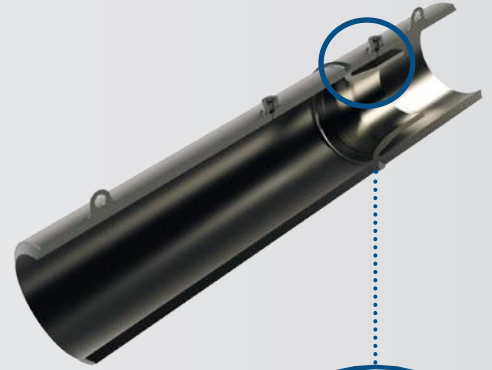


# LONG RADIUS NOZZLE

Suitable for big steam flow rates

## GENERAL DATA

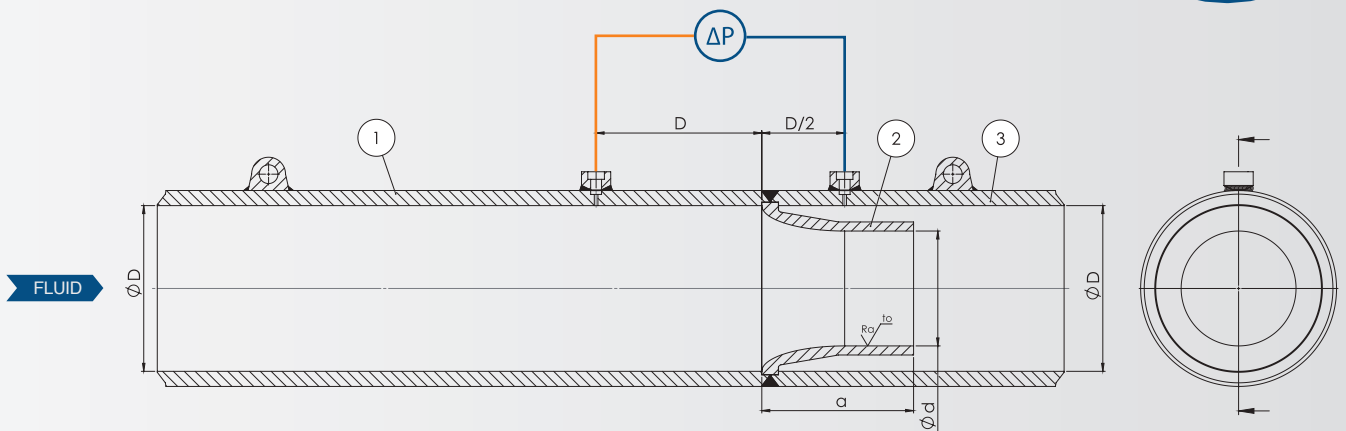
- Standards: ISO 5167-1&3 or ASME MFC-3M
- Flange mounting<sup>(1)</sup>:
  - o ISO PN 2.5 to 420
  - o ASME 150# to 2500#
  - o Others: upon request
 or weld-end connection (BW)
- Material:
  - o Standard: carbon steel, stainless steel
  - o Others<sup>(1)</sup>: according to your application
- Fluid: liquid, gas, steam
- Pipes from  $\phi$  50 to 500 mm
- Accuracy: 2 % of the max flow rate
- Repeatability of measurement: 0.1 %



$\Delta P$   
D-D/2

pressure tap<sup>(1)</sup>

Mark	DESIGNATION
1	Upstream pipe
2	Long radius nozzle
3	Downstream pipe



Optional: stellite coating<sup>(1)</sup>

## TECHNICAL CHARACTERISTICS

		ISO 5167-1&3 & ASME MFC-3M	
		High-ratio nozzle	Low-ratio nozzle
$Re_D$	Reynolds number in the pipe	$10^4 \leq Re_D \leq 10^7$	
D	Inside pipe diameter	$50 \text{ mm} \leq D \leq 630 \text{ mm}$	
$\beta$	d/D	$0.25 \leq \beta \leq 0.8$	$0.2 \leq \beta \leq 0.5$
Ra	Roughness of upstream face and throat	$Ra \leq 10^{-4} \cdot d$	
$b_n$	Cylindrical throat length	$b_n = 0.6 \cdot d$	
$\alpha$	Nozzle total length	$\alpha = D/2 + 0.6 \cdot d$	$\alpha = d + 0.6 \cdot d$
H	Thickness	$3 \text{ mm} \leq H \leq 0.15 \cdot D$	

<sup>(1)</sup> For more details, see «Technical information» section on page 54.